

**Global Climate Change: A Geographic Perspective  
Spring 2012**

A special Geography Colloquium Series, *made possible by the generous support from **The Beirne Carter Foundation.***

\*Co-sponsored by the Environment and Society Program of the Institute of Behavioral Sciences and the Cooperative Institute for Research in Environmental Sciences (CIRES)

All talks are Fridays 3:30-5 with Refreshments afterwards.

EXCEPT March 16<sup>th</sup> which will start at 4 (as a CIRES distinguished lecture)  
Talks either be held in the IBS building, room 155 OR in Guggenheim room 205 (as noted)

**Feb 10: William Boyd, Law School & Krister Andersson, Department of Political Science, Environmental Studies Program, and Institute of Behavioral Science, CU-Boulder**

Title: Climate Policy, REDD+ and the Road Ahead

LOCATION: IBS 155

Bios:



**Krister Andersson** is an assistant professor in Environmental Policy, Department of Political Science and Environmental Studies Program at the University of Colorado at Boulder. He studies the politics of environmental governance developing countries. Most of Krister's recent work seeks to explain subnational variation in local governance outcomes in Latin America. This is also the theme of his most recent book, [Local Governments and Rural Development](#) (University of Arizona Press, 2009), which is co-authored with Gustavo Gordillo and Frank van Laerhoven. In it they compare the institutional conditions for public service performance in 390 local governments in the rural areas of Brazil, Chile, Mexico and Peru.

Previous to Krister's academic career, he served as an international civil servant and consultant for the Food and Agriculture Organization of the United Nations, the World Bank and non-governmental organizations in Bolivia, Costa Rica and Sweden.



William Boyd joined the University of Colorado Law School faculty in 2008. Professor Boyd received his Ph.D. from the Energy & Resources Group at UC-Berkeley and his J.D. from Stanford Law School, where he was an Articles Editor on the Stanford Law Review. After law school, Professor Boyd clerked for Judge Diana Gribbon Motz of the United State Court of Appeals for the Fourth Circuit. Professor Boyd then served as American Association for the Advancement of Science Congressional Science Fellow and Counsel on the Democratic minority staff of the U.S. Senate Committee on Environment & Public Works. He then practiced energy, environmental and climate change law with the firm of Covington & Burling LLP in Washington DC. He continues to be actively involved in legislative and regulatory debates on energy and climate change at state, national, and international levels, and is currently senior advisor and project lead for the Governors' Climate and Forests Task Force (GCF), [www.gcftaskforce.org](http://www.gcftaskforce.org).

As a faculty member at the law school, **Professor Boyd** teaches law & regulation, climate change law & policy, and environmental law. His current research focuses on legal and institutional design issues associated with emerging GHG compliance markets; integration of forests and land use into climate policy; carbon accounting and verification systems for biofuels; regulatory challenges associated with implementation of smart grid technologies; electricity policy; technology transfer in the energy and climate fields; risk assessment; and the role of science and technology in law. Since arriving at the University of Colorado, Professor Boyd has played an active role in establishing the new Renewable and Sustainable Energy Institute (RASEI) – a joint institute between the National Renewable Energy Laboratory (NREL) and the University of Colorado, Boulder -- serving on the campus-wide steering committee that recommended the creation of RASEI and as an inaugural fellow on the RASEI Council of Fellows. Professor Boyd also serves as the University of Colorado representative for the Joint Institute for Strategic Energy Analysis (JISEA) – a newly formed collaborative energy analysis effort between NREL, University of Colorado, Colorado State University, Colorado School of Mines, MIT, and Stanford.

**February 17: Ashwini Chhatre, Department of Geography, University of Illinois at Urbana-Champaign**

**LOCATION:** IBS 155

Institutional Access, Democratic Articulation, and Self-Organized Adaptation to Climate Change

Abstract:

## Institutional Access, Democratic Articulation, and Self-Organized Adaptation to Climate Change

### Abstract:

Tropes of catastrophe have dominated conversations about climate change and its impact on societies and communities. Often, terms like hazard and vulnerability are deployed together to suggest helplessness in adapting to impending climate change. My presentation seeks to disrupt the projection of climate change forecasts into a future full of disasters and refugees. Using a complex systems perspective, I investigate the conditions under which democratic institutions facilitate self-organization in large social-ecological systems in response to exogenous change. Conceptualizing adaptive capacity as an emergent property of a multi-level network of institutions, I analyze household and institutional responses to the impact of climate change on apple production in the Indian Himalayas. Over the last 20 years, the core production zone for apples has steadily shifted northwards towards higher elevations in the Western Himalayas, such that it is now 80km north and 1500ft higher than in 1990. At the southern end of this shift, households have successfully moved from apple to vegetable cultivation catering to growing urban markets, while also increasing their incomes compared to apple production. This presentation explores the suite of institutions – and their interrelationships – that have facilitated successful adaptation to climate change in the Himalayas. Carefully examining the role of public, market, and civic institutions, I argue that democratic governance at multiple scales and articulation between institutions across scale are critical aspects of successful adaptation to climate change.

### Bio:



I am an Assistant Professor in the Department of Geography, University of Illinois at Urbana-Champaign. I am an Indian citizen and have only been in the US for eight-and-a-half years. Five of those were spent in Graduate School at Duke University, where I was awarded a Ph.D. in Political Science. I was the first Giorgio Ruffolo Post-doctoral Fellow in Sustainability Science at Harvard University in 2006-07, before coming to UIUC. Between my BA in Economics from University of Delhi in 1990 and the start of my PhD at Duke, I spent 11 years working in different parts of India, mostly as a community organizer and social activist working on issues related to natural resources like land, forests, and water. A background in Economics, graduate training in Political Science, and longstanding engagement with scholarship in Geography, Anthropology, Landscape Ecology, and Environmental History ensure that my interests will never be confined to a single discipline!

Research is an integral part of being a social activist, at least a well-informed one, and my research experience started well before I joined graduate school. I had the good fortune of collaborating with some of the best scholars in India, and I learnt the

importance of connecting research to policy and social issues from the beginning. Some of that research experience was published as journal articles, and I also co-authored a book on the politics of conservation and development in India based on my pre-graduate school experience. My main research interests lie in the study of intersection of democratic politics with environment and development, with a more recent focus on climate change vulnerability and adaptation. All my field research has so far been confined to India. I am now collaborating with graduate students in working on Tanzania, and with IFRI researchers in analyzing the joint production of livelihoods and forest-related outcomes in countries across Asia, Africa, and Latin America. Ongoing research projects include 1) the long-term political dynamics of redistributive land reforms and their impact on environment and development outcomes at multiple scales, 2) the conceptualization of democracy as the emergent property of complex adaptive networks of public, civic, and market institutions, and its implications for vulnerability and adaptation to climate change 3) institutional drivers of trade-offs and synergies between livelihood benefits, carbon sequestration, and biodiversity conservation from forest commons in human-dominated landscapes, and 4) impact of participation in CBNRM institutions on individual attitudes towards the environment.

**Mar 2: Roger Pielke Jr, Center for Science and Technology Policy Research, CU-Boulder**

The Science and the Politics of Disasters and Climate Change

LOCATION: IBS 155

Bio:



Roger A. Pielke, Jr. joined the faculty of the University of Colorado in 2001. He is currently Professor in the Environmental Studies Program and a Fellow of the Cooperative Institute for Research in the Environmental Sciences (CIRES). At CIRES Roger serves as the Director of the Center for Science and Technology Policy Research. He also served as the Director of Graduate Studies for the University's Graduate Program in Environmental Studies from 2002-2004. Roger's current areas of interest include understanding the relations of science and politics, technology policy in the atmospheric and related sciences, use and value of prediction in decision making, and policy education for scientists. In 2000, Roger received the Sigma Xi Distinguished Lectureship Award and in 2001, he received the Outstanding Graduate Advisor Award by students in the University of Colorado's Department of

Political Science. Before joining the University of Colorado, from 1993-2001 Roger was a Scientist at the National Center for Atmospheric Research.

**March 9: Andrew Comrie, School of Geography and Development, University of Arizona**

Catching Climate Fever: Diagnosing the Changing Environment of Infectious Disease

LOCATION: IBS 155

**Abstract:**

What are the disease impacts of climate change? Climate-health research is a rapidly expanding field that intersects multiple disciplines and approaches. I review key concepts using a range of infectious disease examples from my own research group, and then focus on mosquito vectors of disease in the US. Climate and climate change affect the ecology of infectious diseases via disease hosts, vectors, and reservoirs. In the southern United States, *Culex quinquefasciatus* may be a primary vector for West Nile Virus (WNV) in many locations because of its affinity for urban environments and because they feed on humans and bird hosts. Changes in temperature and precipitation regimes may affect the population and season length of this mosquito, altering the risk of WNV transmission to humans. It is difficult to assess the impact of climate changes on local mosquito populations, given the paucity of observations, and therefore we have developed the Dynamic Mosquito Simulation Model (DyMSiM). Using downscaled general circulation model (GCM) projections for current and future conditions, we modeled mosquito population dynamics across the southern United States using DyMSiM. As expected, modeled mosquito populations responded differently by location, season, and time period. Temperature changes have a marked positive effect on mosquito population in fall, while summer showed a strong positive link between precipitation and mosquito populations. Higher temperatures led to a rise in populations during the cooler months, but during summer decreased breeding habitats due to drying from evaporation. In the Western US, projected drier conditions did not decrease mosquito populations because they rely heavily on permanent water sources which are not controlled by precipitation.

Bio:



Andrew C. Comrie, Ph.D., became Associate Vice President for Research and Dean of the Graduate College at the University of Arizona in 2006. Dr. Comrie is a climatologist with a primary appointment as a Professor in the School of Geography and Development. He has interdisciplinary/joint appointments in Atmospheric Sciences, Arid Lands Resource Sciences, Entomology & Insect Science,

Global Change, Public Health, Remote Sensing & Spatial Analysis, and Statistics. Together with his research group, he has conducted broadly interdisciplinary research in climate variability and change, with particular focus on the connections between climate and health, air quality, and environmental impacts. His research support includes major funding from the National Science Foundation, the National Oceanographic and Atmospheric Administration, and the Environmental Protection Agency.

**Mar 16: Diana Liverman, Co-Director, Institute of the Environment, Professor of Geography and Development, University of Arizona**

**\*\*\* 4-6 pm, IBS 155, also CIRES distinguished lecture series**

**TBA**

**Bio:**



*PhD, Geography, University of California, Los Angeles*

Diana is the co-director of the University of Arizona [Institute of the Environment](#) with Jonathan Overpeck.. Her tenure and disciplinary home is in the [School of Geography and Development](#) and in 2011 she was awarded a Regents Professorship at the University of Arizona. She has maintained an affiliation with Oxford University where she is a visiting professor of Environmental Policy and Development in the [School of Geography and Environment](#), a fellow of [Linacre College](#), and a fellow in the [Environmental Change Institute](#).

Her career has focused on the human dimensions of global environmental change and her main research interests include climate impacts, vulnerability and adaptation, and climate policy and mitigation especially in the developing world.

She also works on the political economy and political ecology of environmental management in the Americas, especially in Mexico.

Her recent honors include Distinguished Scholarship Honors from the Association of American Geographers (2011) and the Founders Gold Medal of the Royal Geographical Society (2010).

She has been an active member of national and international advisory committees on global change including the US NAS Committee on the Human Dimensions of Global Environmental Change and the Inter American Institute (IAI) for Global Change Research. She was member of the National Academy of Sciences [Committee on America's Climate Choices](#) which is advised the US government on responses to climate change and chaired the subpanel on [Informing Decisions](#). She was the chair of the scientific advisory committee international [Global Environmental Change and Food Systems](#) (GECAFS) program. Her current service includes committees for

the ICSU Transition Team, the international [Earth Systems Science Partnership](#) and the [IHDP Earth Systems Governance](#) project. She is the editor of the [Annual Review of Environment and Resources](#), and editorial boards for [Climatic Change](#), [Environmental Science and Policy](#), and [Global Environmental Change](#). She has works with several arts and cultural organizations on climate change issues (see service links).

**April 6: Konrad Steffen, Director CIRES (Cooperative Institute for Research in Environmental Sciences), Professor Department of Geography, CU-Boulder**

Greenland ice sheet and dynamic response to global warming  
LOCATION: IBS 155

Bio:



**April 13: NOW OPEN**

**April 20 James Sickman, Department of Environmental Sciences, University of CA Riverside**

**LOCATION:** Guggenheim room 205

Title: Paleoreconstructions of Sierra Nevada snowpack using diatom inference models